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Section I (Amendments to the Claims)

Please amend claims 1, 8, 10, 11, 16, 26, 29 and 35-37, as set out in the following listing of claims 1-40 of the application.

1. (Currently amended) A stabilized cyclosiloxane material for use as a dielectric precursor, the stabilized cyclosiloxane material comprising a cyclosiloxane reagent, an end-capping reagent, and a free radical inhibitor, wherein the end-capping reagent is selected from the group consisting of compounds of the formula



wherein:

each of R¹, R² and R³ is independently selected from among H, C₁-C₈ alkyl and C₅-C₁₂ aryl; and

X is selected from among OH, and nitrogen-containing silyl, and when any of R¹, R² or R³ is C₅-C₁₂ aryl, then X can also be silyloxy.

2. (Cancelled)

3. (Previously presented) The stabilized siloxane dielectric precursor according to claim 1, wherein said cyclosiloxane reagent is of the formula:



wherein each of R and R' is same or different and independently selected from the group consisting of hydrogen, C₁-C₈ alkyl, C₁-C₈ alkoxy, C₁-C₈ alkene, C₁-C₈ alkyne, and C₁-C₈ carboxyl; and n is from 2 to 8.

4. (Previously presented) The stabilized siloxane dielectric precursor according to claim 1, wherein said cyclosiloxane reagent is selected from the group consisting of: polyhedral oligomeric silsesquioxanes (POSS), octamethylcyclotetrasiloxane (OMCTS),

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hexamethylcyclotetra-siloxane (HMCTS), tetramethylcyclotetrasiloxane (TMCTS), and mixtures thereof.

5. (Previously presented) A stabilized cyclosiloxane material for use as a dielectric precursor, the stabilized cyclosiloxane material comprising a cyclosiloxane reagent and an end-capping reagent wherein said cyclosiloxane reagent is 1,3,5,7-tetramethylcyclotetrasiloxane (TMCTS).

6. (Previously presented) The stabilized siloxane dielectric precursor according to claim 1, wherein said end-capping reagent and said free radical inhibitor together form a stabilizing agent which is present in a concentration range from about 0.01% to 10.0 % by weight based on a total weight of said material, and said end-capping reagent is selected from the group consisting of bis(trimethylsiloxy)methylsilane, silyl-N-methylacetamides, trifluoropropyltrimethylsilyl-N-methylacetamide and hexamethyldisilazane.

7. (Previously presented) The stabilized siloxane dielectric precursor according to claim 1, wherein said stabilizing agent is present in a concentration range from 1.00 to 10.00 % by weight.

8. (Currently amended) The stabilized siloxane dielectric precursor according to claim 6, wherein said stabilizing agent comprises ~~the combination of bis(trimethylsiloxy)methylsilane and butylated hydroxyl toluene~~.

9. (Original) The stabilized siloxane dielectric precursor according to claim 1, wherein said end-capping agent reacts with hydroxyl or radical groups resulting from cleavage of a [Si-O] bond of the siloxane dielectric precursor.

10. (Currently amended) The stabilized siloxane dielectric precursor according to claim 1, wherein ~~said end-capping agent includes a monofunctional-silylating agent having a formula R¹R²R³SiX, wherein X is a reactive site, selected from the group consisting of H,~~

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OH, silyloxy, and nitrogen-containing silyl, each of R¹, R³ and R⁵ is the same or different and is independently selected from hydrogen, C₁-C₈ alkyl, and C₆-C₁₂ aryl.

11. (Currently amended) The stabilized siloxane dielectric precursor according to claim 1, wherein said end-capping reagent is selected from the group consisting of: naphylphenylmethylsilanol (NPMS), silyl-N-methylacetamides, and trifluoropropyldimethylsilyl-N-methylacetamide (TFSA), bis(trimethylsiloxy)methylsilane, and hexamethyldisilazane.

12. (Cancelled)

13. (Previously presented) The stabilized siloxane dielectric precursor according to claim 6, wherein said stabilizing agent comprises a phenol.

14. (Previously presented) The stabilized siloxane dielectric precursor according to claim 6, wherein said stabilizing agent comprises a hindered phenol.

15. (Previously presented) The stabilized siloxane dielectric precursor according to claim 6, wherein said free radical inhibitor is selected from the group consisting of butylated hydroxy toluene (BHT), hydroquinone, butylated hydro anisole (BHA) and diphenylamine.

16. (Currently amended) A process for stabilizing a cyclosiloxane dielectric precursor, including dosing a cyclosiloxane reagent with a stabilizing agent comprising an end-capping reagent and a free radical inhibitor, to yield a stabilized cyclosiloxane material comprising the cyclosiloxane reagent, the end-capping reagent, and the free radical inhibitor, wherein the end-capping reagent is selected from the group consisting of compounds of the formula

R¹R²R³SiX

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wherein:

each of R¹, R² and R³ is independently selected from among H, C₁-C₈ alkyl and C₅-C₁₂ aryl; and

X is selected from among OH, and nitrogen-containing silyl, and when any of R¹, R² or R³ is C₅-C₁₂ aryl, then X can also be silyloxy.

17. (Withdrawn) The process according to claim 16, wherein said stabilizing agent is present in a concentration range from about 0.01% to 10.0 % by weight.

18. (Withdrawn) The process according to claim 16, wherein said stabilizing agent is present in a concentration range from about 0.05 to 1.00 % by weight.

19. (Withdrawn) The process according to claim 16, further comprising a purification step.

20. (Withdrawn) The process according to claim 19, wherein said dosing occurs before, after or during said purification step.

21. (Withdrawn) The process according to claim 19, wherein said purification step is selected from the group consisting of

(1) contacting the cyclosiloxane dielectric precursor with an adsorbent bed material, so as to remove therefrom at least a portion of the water, and optionally at least one other impurity, to produce a cyclosiloxane precursor having a reduced level of water and optionally at least one other impurity; and removing the purified cyclosiloxane precursor from the adsorbent bed material; and

(2) distilling a starting mixture comprising at least water and at least one cyclosiloxane dielectric precursor, in the presence of an azeotropic component, so as to form an azeotropic mixture with the water contained in said starting mixture; in order to produce (A) a distillate fraction comprising water and the azeotropic component and (B) a balance fraction comprising

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cyclosiloxane, whereby said balance fraction (B) is substantially reduced in water relative to said starting mixture; and

(3) a combination of 1 and 2;

22. (Withdrawn) The process according to claim 19, wherein said purification step reduces concentrations of water and trace acids in cyclosiloxanes to levels in a range of from about 1 to 20 ppm and from about 0.001 to 0.00001 wt %, respectively.

23. (Cancelled)

24. (Cancelled)

25. (Cancelled)

26. (Currently amended) A stabilized cyclosiloxane material for use as a dielectric precursor, the stabilized cyclosiloxane material comprising a cyclosiloxane reagent, and an end-capping reagent, wherein said cyclosiloxane reagent is selected from the group consisting of polyhedral oligomeric silsesquioxanes (POSS), hexamethylcyclotetra-siloxane (HMCTS), tetramethylcyclotetrasiloxane (TMCTS), and mixtures thereof, wherein the end-capping reagent is selected from the group consisting of compounds of the formula

$R^1R^2R^3SiX$

wherein:

each of R^1 , R^2 and R^3 is independently selected from among H, C₁-C₈ alkyl and C₅-C₁₂ aryl; and

X is selected from among OH, and nitrogen-containing silyl, and when any of R^1 , R^2 or R^3 is C₅-C₁₂ aryl, then X can also be silyloxy.

27. (Previously presented) The stabilized cyclosiloxane material of claim 26, dosed with a stabilizing agent comprising an end-capping reagent and optionally a free radical inhibitor.

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28. (Previously presented) The stabilized cyclosiloxane material of claim 27, wherein said stabilizing agent is present in a concentration from about 0.01% to about 10.0% by weight based on a total weight of said material.

29. (Currently amended) The stabilized cyclosiloxane material of claim 28, where said end-capping reagent is selected from the group consisting of bis(trimethylsiloxy)methylsilane, silyl-N-methylacetamides, and trifluoropropyldimethylsilyl-N-methylacetamide and hexamethyldisilazane.

30. (Previously presented) The stabilized cyclosiloxane material of claim 29 comprising said free radical inhibitor, wherein said free radical inhibitor is selected from the group consisting of butylated hydroxy toluene (BHT), hydroquinone, butylated hydro anisole (BHA) and diphenylamine.

31. (Previously presented) The stabilized cyclosiloxane material of claim 26, wherein said cyclosiloxane reagent is POSS.

32. (Previously presented) The stabilized cyclosiloxane material of claim 26, wherein said cyclosiloxane reagent is HMCTS.

33. (Previously presented) The stabilized cyclosiloxane material of claim 30, wherein said stabilizing agent comprises a phenol.

34. (Previously presented) The stabilized cyclosiloxane material of claim 33, wherein said stabilizing agent comprises a hindered phenol.

35. (Currently amended) The stabilized cyclosiloxane material of claim 29, wherein said end capping reagent is selected from the group consisting of silyl-N-methylacetamides, and trifluoropropyldimethylsilyl-N-methylacetamide and hexamethyldisilazane.

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36. (Currently amended) The stabilized cyclosiloxane material of claim 29, wherein said end capping reagent is ~~selected from the group consisting of trifluoropropylidemethylsilyl-N-methylacetamide and hexamethyldisilazane.~~

37. (Currently amended) The stabilized cyclosiloxane material of claim 36, wherein said end capping reagent is hexamethyldisilazane selected from the group consisting of silyl-N-methylacetamides.

38. (Previously presented) The stabilized cyclosiloxane material of claim 30 comprising said free radical inhibitor, wherein said free radical inhibitor is selected from the group consisting of butylated hydroxy toluene (BHT), hydroquinone, and butylated hydro anisole (BHA).

39. (Previously presented) The stabilized cyclosiloxane material of claim 38 comprising said free radical inhibitor, wherein said free radical inhibitor is selected from the group consisting of butylated hydroxy toluene (BHT), and hydroquinone.

40. (Previously presented) The stabilized cyclosiloxane material of claim 39 comprising said free radical inhibitor, wherein said free radical inhibitor is butylated hydroxy toluene (BHT).